REMARKS

Claims 1-20 remain pending in the application.

Applicants acknowledge and appreciate that the Examiner found the previous arguments persuasive and has withdrawn the previous rejections of claims 1-20. Applicants acknowledge that the Examiner has presented new grounds of rejection.

The Examiner rejected claims 1-20 under 35 U.S.C. 101 as being directed to non-tangible result. Applicants respectfully traverse this rejection.

The Examiner rejected claims 1-20 by asserting that Applicants did not provide means for the process step of executing a software object, and that this step did not produce a tangible result. Applicants respectfully assert that 35 U.S.C. §101 allows for patenting a new useful and non-obvious process. There is no requirement that each element produce a tangible result. The element of the claims that the Examiner alleges would cause the claims to be non-statutory subject matter calls for performing a process step, *i.e.*, executing a software object. There is no requirement that a "means" for executing a software object be claimed. Such requirements would apply for a means plus function claim under 35 U.S.C. §112, paragraph 6. The process claimed by claim 1, for example, includes several steps, one of them being executing a software object. The totality of the elements of claim 1, indeed, produces a tangible result which, for example, includes accessing at least a portion of the input/output space. Further, the totality of the elements of claim 8, also produces a tangible result which, for example, includes accessing at least a portion of an input/output device. Further, independent claims 12, 13, and 17 call for various systems and/or apparatuses that provide for accessing an I/O space, and thus are patentable subject matter. Claims that depend from independent claims 1, 12, 13, and 17 also call

for patentable subject matter for at least the reasons cited above. Therefore, claims 1-20, indeed, call for allowable subject matter that, indeed, produces a tangible result. Therefore, claims 1-20 are in conformity with 35 U.S.C. §101 and, thus, are allowable.

The Examiner rejected claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,469.556 (*Clifton*). Applicants respectfully traverse this rejection.

The Applicants respectfully assert that all of the elements of claims of the present invention are not disclosed or made obvious by *Clifton*. The Examiner cites non-analogous prior art to argue obviousness of the claims of the present invention. *Clifton* is merely directed to a resource access security system for controlling the access to resources of a data processing system. *Clifton* does not disclose executing a software object, as called for by claim 1 of the present invention. In fact, *Clifton* simply does not disclose a software object. Therefore, any security levels that the Examiner claims is disclosed by *Clifton*, does not apply to any software object.

Clifton is related to a resource access security system. *Clifton* discloses a user of a data processing system that is assigned a clearance level. *See* col. 5, lines 12-16. The clearance level of *Clifton* corresponds to a classification. *Id.* *Clifton* discloses that the user is assigned to one or more domains, which define various resources of a data processing system. *Id.* The disclosure of *Clifton* is directed to the access rights <u>of the user</u> being defined by the intersection of the user's clearance level and privileges. *See* col. 5, lines 16-18. This is in contrast to the security level associated <u>with a software object</u>, as called for by claim 1 of the present invention. There is no disclosure that would make obvious establishing a security level for a software object, as called for by claim 1 of the present invention.

Further, the Examiner argues that execution of instructions make obvious executing a software object; however, there is no disclosure of a software object in *Clifton*, and the execution of the instructions does not make obvious the execution of a software object. The Examiner has mistaken the term "executing" and cited col. 2, lines 35-45 of *Clifton* to support the obviousness arguments However, this section merely refers to a user having a particular privilege of executing one or more of a trusted processes corresponding to higher privileges while being unable to access resources assigned to the higher classification levels. *See* col. 2, lines 35-45. However, this does not make obvious establishing or executing a software object. *Clifton* is merely directed to an unsecured processor 10 and a secured processor 12. *See* col. 5, lines 25-27. *Clifton* discloses that an unsecured processor 10 executes unsecured instructions and a secured processor 12 executes secured instructions. *Id.* However, there is no disclosure of assigning or establishing a security level for any particular software object in *Clifton*. Security issues disclosed by *Clifton* merely refer to the <u>user's</u> security level, in contrast to the security level of a software object.

Further, *Clifton* does not disclose or make obvious performing a multi-table I/O access using one of security levels, as called for by claim 1 of the present invention. The Examiner points to the clearance level of the data processing systems to argue obviousness of this element. However, *Clifton* merely discloses that the resources are organized through pages which correspond to clearance level or classifications of the data processing system. *See* col. 9, lines 5-8. The pages disclosed in *Clifton* refer to using page offset information that identify the page to which a particular resource belongs. *See* col. 5, lines 8-10. *Clifton* discloses that tables are provided in order to perform a descriptor translation process performed by a descriptor translation module 52A. *See* col. 9, lines 21-23. The tables of *Clifton* are used for user/job

offset information. *See* col. 9, lines 25-30. *Clifton* discloses that a system root pointer is stored in order to point to the base address of the user/job table. *See* col. 9, lines 31-33. *Clifton* discloses that each of the domain tables include domain entries that have been stored and a domain point trip point to the base address of the page table. However, these domains refer to domains that are assigned <u>to a user</u> based upon the clearance level of a particular user, which is in contrast with the security level assigned to a software object. Therefore, there is no multi-table I/O access using at least one security level disclosed or made obvious by *Clifton*. The Examiner has failed to point to any evidence to the contrary.

Clifton merely discloses tables relating to domain entries wherein the domain relate to the clearance level of the user. In contrast, claim 1 of the present invention calls for establishing security levels for a software object and performing a multi-table I/O access using one of the security levels. *Clifton* simply does not disclose a multi-table I/O access using security levels that relate to a particular software object. Further, *Clifton* simply does not disclose executing software objects and, as described above, trusted processes corresponding to higher privilege levels of *Clifton* do not make this element obvious. The Examiner cited col. 8, lines 19-29, to argue obviousness of this element; however, there is no disclosure of executing a software object in this passage or any other passage of *Clifton*. *Clifton* merely discloses that the control signal from a secured micro-code may be applied to a secure arithmetic logic unit 56 in order to control operations. *Clifton* simply does not disclose or make obvious any execution of a software object. Further, *Clifton* merely implements resource access security control but does not make obvious the I/O space access using the multi-table I/O access using security levels called for by claim 1 of the present invention. Therefore, for various reasons, *Clifton* does not disclose many elements of claim 1 of the present invention.

The Examiner fails to provide a *prima facia* case of obviousness for various reasons. For example, the Examiner fails to identify a problem that would be addressed by those skilled in the art based upon *Clifton*. Therefore, those skilled in the art would not find motivation to modify *Clifton* to make obvious all of the elements of claim 1 of the present invention. Further, *arguendo,* even if *Clifton* were to be used by those skilled in the art, *Clifton* simply does not disclose or make obvious all of the elements of claims of the present invention. The Examiner argues that obviousness argument is only needed for one element, *i.e.,* the element of executing a software object. However, this is not the case since *Clifton* simply does not make obvious this element. Further, other elements are also not disclosed or made obvious by *Clifton*. Therefore, claim 1 of the present invention is allowable.

Claim 12 calls for an apparatus that comprises means for performing a multi-table I/O space access using at least one of a security level that may be established for said software object being executed. Therefore, as described above, *Clifton* does not disclose means for performing a multi-table (I/O) space access. Accordingly, claim 12 of the present invention is allowable.

Claim 13 calls for an (I/O) access interface that is coupled to a bus and a memory unit wherein the memory access interface is capable of providing a processor of a multi-level table I/O space access to access a portion of the memory unit. As described above, *Clifton* does not disclose the multi-level table I/O space access. Accordingly, all of the elements of claim 13 of the present invention are not taught, disclosed, or suggested by *Clifton*. Therefore, claim 13 of the present invention is allowable. Further, claim 17 calls for a computer programmable device encoded with instructions which, when executed by a computer, performs a method that includes performing a multi-table I/O space access, which for at least the reasons cited above, is not

taught, disclosed, or suggested by *Clifton*. Therefore, claim 17 of the present invention is allowable.

Independent claims 1, 12, and 13 are allowable for at least the reasons cited above. Additionally, dependent claims 2-7, 9-11, 14-16, and 18-20, which respectively depend from claims 1, 8, 12, 13, and 17, are also allowable for at least the reasons cited above.

Reconsideration of the present application is respectfully requested. In light of the arguments presented above, Applicants respectfully assert that claims 1-20 are allowable. In light of the arguments presented above, a Notice of Allowance is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, **the Examiner is requested to call the undersigned attorney at the Houston, Texas telephone number (713) 934-4069** to discuss the steps necessary for placing the application in condition for allowance.

<div align="center" style="margin-left:40%">

Respectfully submitted,

WILLIAMS, MORGAN & AMERSON, P.C.
CUSTOMER NO. 23720
</div>

Date: <u>May 8, 2007</u>   By: <u>   /Jaison C. John/   </u>

                                         Jaison C. John, Reg. No. 50,737
                                         10333 Richmond, Suite 1100
                                         Houston, Texas 77042
                                         (713) 934-7000
                                         (713) 934-7011 (facsimile)
                                         ATTORNEY FOR APPLICANT(S)